

XV.—*Descriptions of Three new African Cichlid Fishes of the Genus Tilapia, preserved in the British Museum.* By G. A. BOULENGER, F.R.S.

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Tilapia kafuensis.

Depth of body $2\frac{1}{4}$ times in total length, length of head 3 times. Head $1\frac{2}{3}$ times as long as broad; snout rounded, with straight upper profile, slightly broader than long, a little shorter than postocular part of head; eye $5\frac{1}{2}$ times in length of head, $\frac{2}{5}$ interorbital width, a little less than præorbital depth; mouth rather large, $\frac{4}{5}$ width of head, extending to between nostril and eye; teeth in 8 series, 110 in outer series of upper jaw; 4 series of scales on the cheek, width of scaly part a little greater than diameter of eye. Gill-rakers moderate, 25 on lower part of anterior arch. Dorsal XVII 13; last spine longest, $\frac{2}{3}$ length of head; longest soft ray $\frac{2}{3}$ length of head. Anal III 11; third spine not quite $\frac{1}{3}$ length of head. Pectoral slightly longer than head, reaching vertical of origin of anal. Ventral reaching between vent and anal. Caudal rounded. Caudal peduncle as long as deep. Scales cycloid, $33\frac{4\frac{1}{2}}{18}$; lateral lines $\frac{22-23}{12-13}$. Dark brown above, whitish beneath; a black opercular spot and three ill-defined black spots on the side below upper lateral line; soft dorsal and anal fins with round light spots between the rays.

Total length 360 mm.

A single specimen from the Kafue River, N.W. Rhodesia, presented by Mr. T. Codrington.

Distinguished from *T. mossambica* by the presence of four series of scales on the cheek and more numerous gill-rakers.

Tilapia eduardiana.

Depth of body equal to length of head, $2\frac{1}{2}$ to $2\frac{3}{4}$ times in total length. Head nearly twice as long as broad; snout rounded, with straight or convex upper profile, much broader than long ($1\frac{1}{2}$ to $1\frac{2}{3}$), $\frac{1}{2}$ to $\frac{2}{3}$ postocular part of head; eye $3\frac{1}{2}$ to $3\frac{2}{3}$ times in length of head, $1\frac{1}{3}$ to $1\frac{1}{2}$ times in interorbital width, much longer than præorbital depth; mouth moderate, $\frac{2}{5}$ to $\frac{2}{3}$ width of head, extending to between nostril and eye; teeth in 3 series, 66 to 88 in outer series of upper jaw; 2 or 3 series of scales on the cheek, width of scaly part $\frac{1}{2}$ to $\frac{2}{3}$ diameter of eye. Gill-rakers short, 20 to 23 on lower part

of anterior arch. Dorsal XVI-XVII 11-13; spines subequal from the fifth or sixth, $\frac{2}{3}$ to not quite $\frac{1}{2}$ length of head; longest soft rays $\frac{1}{2}$ to $\frac{2}{3}$ length of head. Anal III 9-10; third spine longer than longest dorsal, $\frac{1}{2}$ or a little more than $\frac{1}{2}$ length of head. Pectoral 1 to $1\frac{1}{6}$ times as long as head, reaching beyond vertical of origin of anal. Ventral reaching vent or origin of anal. Caudal truncate. Caudal peduncle as long as deep. Scales 31-32 $\frac{3\frac{1}{2}-4}{13-15}$; lateral lines $\frac{20-22}{12-15}$. Dark brown above, with or without very indistinct darker cross-bars, yellowish beneath; a black opercular spot; fins brown or blackish, uniform or with oblique streaks on the soft dorsal.

Total length 180 mm.

Several specimens from the south-eastern slope of Mt. Ruwenzori, altitude 3200 feet, collected by Mr. R. B. Woosnam on the Ruwenzori Expedition. I had first referred this fish to *Tilapia nilotica*, from which it differs in the longer caudal peduncle, the truncate caudal fin, and the longer anal spines.

Tilapia macrochir.

Depth of body $1\frac{3}{4}$ to $2\frac{1}{2}$ times in total length, length of head 3 times. Head $1\frac{2}{3}$ to $1\frac{4}{5}$ times as long as broad; upper profile descending in a strong curve, often very abrupt in front; snout rounded, sometimes with concave upper profile, a little broader than long, shorter than postocular part of head; eye 4 to $5\frac{1}{2}$ times in length of head, $\frac{2}{5}$ to $\frac{2}{3}$ inter-orbital width, equal to or a little less than præorbital depth; mouth rather small, $\frac{1}{2}$ to $\frac{2}{3}$ width of head, extending to between nostril and eye; teeth in 5 to 8 series, 70 to 100 in outer series of upper jaw; 2 or 3 series of scales on the cheek, width of scaly part not greater than diameter of eye. Gill-rakers moderate, 21 to 25 on lower part of anterior arch. Dorsal XVI (rarely XV) 12-13; last spine longest, $\frac{1}{2}$ to $\frac{2}{3}$ length of head; longest soft ray $\frac{3}{4}$ to 1 length of head. Anal III 9-10; third spine $\frac{1}{3}$ to $\frac{1}{2}$ length of head. Pectoral $1\frac{1}{3}$ to $1\frac{1}{2}$ ($1\frac{1}{4}$ in young) length of head, reaching beyond vertical of origin of anal. Ventral reaching vent or anal. Caudal truncate or slightly emarginate. Caudal peduncle deeper than long. Scales cycloid, 29-31 $\frac{3-3\frac{1}{2}}{13-15}$; lateral lines $\frac{19-22}{11-14}$. Olive-brown above, golden-yellow beneath, sometimes with rather indistinct darker longitudinal streaks following the series of scales; a blackish opercular spot; head and anterior part of body usually with small brown or blackish spots; young with 7 to 10 narrower vertical dark bars;

dorsal fin with more or less dark and light longitudinal streaks.

Total length 340 mm.

Several specimens from the Victoria Falls, Zambesi, presented by Mr. T. Codrington, and from Lake Bangwelu, presented by Mr. F. H. Melland.

Nearly allied to *T. andersonii*, Casteln. ; distinguished by the longer pectoral fin.

XVI.—*Descriptions of new African Batrachians preserved in the British Museum.* By G. A. BOULENGER, F.R.S.

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Pyxicephalus macrotympanum.

Vomerine teeth in two oblique series between the choanæ, close to the inner borders of the latter. Head feebly depressed, much broader than long ; snout rounded, as long as the orbit ; canthus rostralis obtuse, loreal region concave ; nostril a little nearer the eye than the end of the snout ; interorbital space nearly as broad as the upper eyelid ; tympanum distinct, larger than the eye. Fingers extremely short, blunt, first and second equal ; toes short, blunt, half webbed ; sub-articular tubercles small ; a large, compressed, very prominent but not sharp-edged inner metatarsal tubercle, its length equalling that of the inner toe. Tarso-metatarsal articulation reaching the tympanum ; tibia two-fifths the length of head and body. Skin smooth. Pale greyish brown above, with dark brown dots, and a dark brown band extending from the end of the snout, through the nostril and eye, to the groin, where it breaks up into spots, and expanding into a large blotch below the eye and on the temple ; a brown line borders the upper lip ; lower lip with large brown blotches ; lower parts white, with a few brown dots on the throat.

From snout to vent 55 mm.

A single female specimen from Gallaland, west of the Juba River, from the collection of Dr. Donaldson Smith. Had been referred to *Rana (Pyxicephalus) ornata*, Peters, in P. Z. S. 1895, p. 540 ; differs from that species in the broader head with more rounded snout and broader inter-orbital region, and in the larger tympanum.